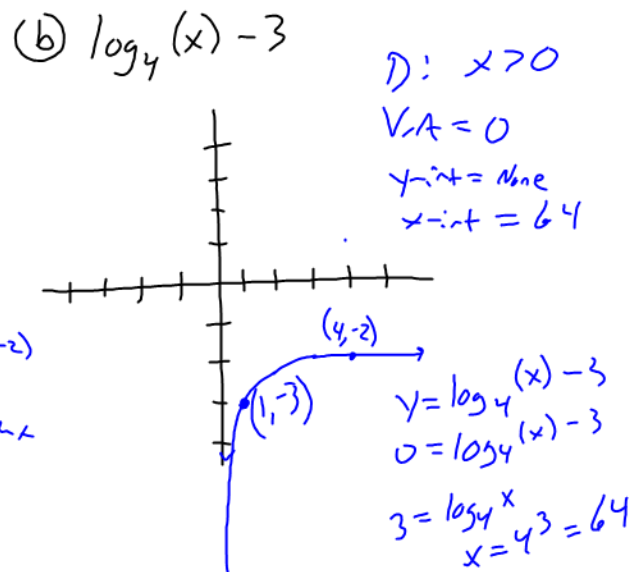
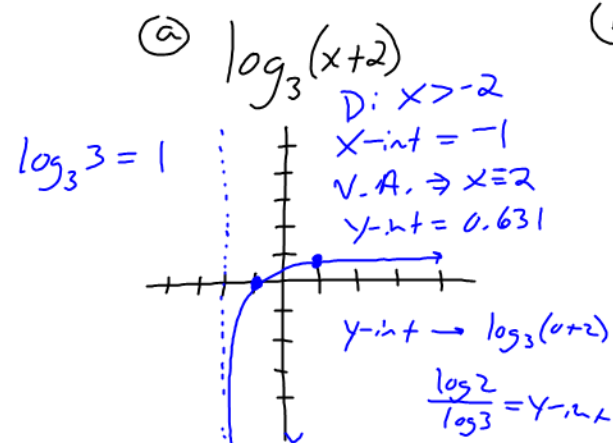


① Graph by hand and identify the domain, intercepts, and asymptote.



② Solve for x

(a) $\ln(3x+5) = 8$

$\ln(3x+5) = 8$

$e^8 = 3x+5$
 -5 -5

$\frac{3x}{3} = \frac{e^8 - 5}{3}$

$x = \frac{e^8 - 5}{3}$

$x = 991.985$

(b) $(e^x)^2 - e^x = 6$

$x^2 - x - 6 = 0$

$(x-3)(x+2) = 0$

$x = 3, -2$

$e^x = 3$ $e^x = 2$

$x = \ln 3$ ~~$x = \ln 2$~~
 $x = 1.0986$

$$\textcircled{58} \quad \frac{525}{1+e^{-x}} = 275$$

$$\frac{525}{275} = \frac{275(1+e^{-x})}{275}$$

$$\frac{1.909}{-1} = \frac{1+e^{-x}}{-1}$$

$$\frac{0.909}{\ln} = \frac{e^{-x}}{\ln}$$

$$\frac{\ln 0.909}{-1} = \frac{-x}{-1}$$

$$-\ln(0.909) = x$$

$$x \approx 0.0954$$

$$(56) \quad e^{2x} - 5e^x + 6 = 0$$

$$(e^x - 2)(e^x - 3) = 0$$

$$e^x = 2 \quad e^x = 3$$

$$x = \ln(2) \quad x = \ln(3)$$

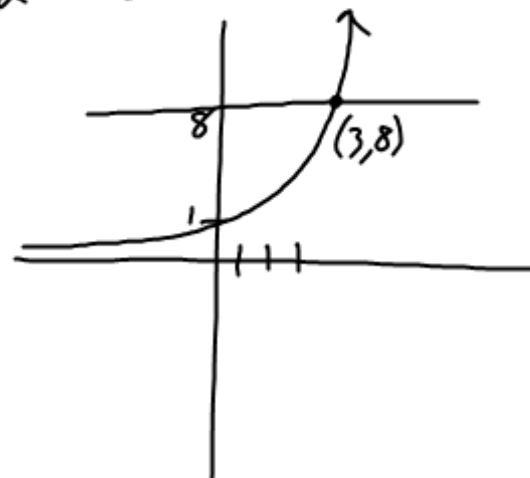
$$(45) \quad \frac{2e^{5x}}{2} = \frac{18}{2}$$

$$\ln e^{5x} = \ln 9$$

$$5x = \ln 9$$

$$x = \frac{1}{5} \ln(9) \approx 0.439$$

$$(9) \quad 2^x = 8$$



$$x = \frac{\log(8)}{\log(2)} = 3$$

Sect. 3.4

#47-49, 51, 73, 77, 79,

85, 87, 88, 89, 116

